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Understanding Resistance Factors in Professional E-Learning:

A Literature Review

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Understanding Resistance Factors in Professional E-Learning:

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Report

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Abstract

Understanding Resistance Factors in Professional E-Learning: A Literature Review

by

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Professional training involving the use of online tools and technology (also called "e-learning") has become a lucrative alternative to live, in-person instruction in today's 21st century workplaces. However, several factors can impact the adoption of these online services. This report reviews literature concerning employer and employee-related factors that have caused resistance or otherwise hindered adoption of e-learning services in professional settings. This review identified two factors associated with employer resistance—(a) unclear leadership goals and (b) high cost—and two factors associated with employee resistance—(a) individual learner differences and (b) work environment. The limitations of this literature review, as well as possible future research and directions, are also discussed.

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Chapter 1: Introduction

Six months after starting at Company X, Steven receives an email with a calendar invite for mandatory new-hire sexual harassment training. Mary, Steven's supervisor, had warned him about the all-day training the previous week in order to give Steven time to rearrange his work schedule. According to Mary, a third party company was hired every year by Company X to host this training. This outside company provided the presentation materials as well as the instructors—Company X provided the room and some light refreshments for the attendees. Steven is told that he will be asked to repeat this training again in 5 years.

This type of traditional workplace training, the "planned effort by a company to facilitate employees' learning of job-related competencies," has been common in society for decades (Kumpikaitė & Čiarnienė, 2008, p. 369). Employers and upper-level management invest in HR and other job-related, instructor-led trainings for the benefit of their employees. These trainings may occur on an as-needed or regular basis, are paid for by the company, and typically require scheduled physical meetings that take place on company time during regular work hours. Not only have these company-provided learning opportunities been shown to increase employee retention, engagement, and satisfaction, but they also tie back to business results, including increased profits (Cairns, 2012).

Today's businesses are experiencing a rapidly growing interest in expanding professional workplace trainings in order to attain these benefits. But, workforce and social demographics are changing. Today, high Internet use, low Internet costs, a growing mobile workforce, a better understanding of learning styles, and the expansion of e-learning products have led to a similar expansion of training program offerings. While previous trainings offered in the workplace utilized live, instructor-led classes, today's options also include entirely online, self-paced, and blended learning opportunities. This incorporation of online technology for instructional purposes is called e-learning.

E-learning services can improve learner experiences "by creating, using, and managing technological processes and resources" to reach educational goals (Mishra, Koehler & Kereluik, 2009, p. 48). For example, companies such as AMC, Google, McAfee, and AT&T are using e-learning services, specifically MOOCS such as those offered by Udemy and Udemy for Business, to build talent pipelines, onboard employees, provide self-directed career development, train workforces, develop brand marketing, and help employees collaborate internally (Hilgerch, 2014; Udemy.com). In this MOOC-enhanced environment, employees are not only onboarded with the service after being hired, but also collaborate with peers and expand their own professional skill base within the same system. The online service therefore provides an all-encompassing learning environment that grows with the employee.

For other companies, job training can be offered through a customized learning management service (LMS), which are static, branded learning platforms. With this service, employees log in and access lessons and other digital content that have been linked to a specific training topic, as visualized in Figure 1. Companies such as Samsung,

YouTube, and Box use Litmos, an LMS service, to deploy employee, compliance, and customer training, as well as to certify business partners and contractors (Figure 1).

In both of these examples, companies like Udemy and Litmos have partnered with existing businesses to create new or updated learning environments that aim to meet the needs of a growing and evolving workforce.

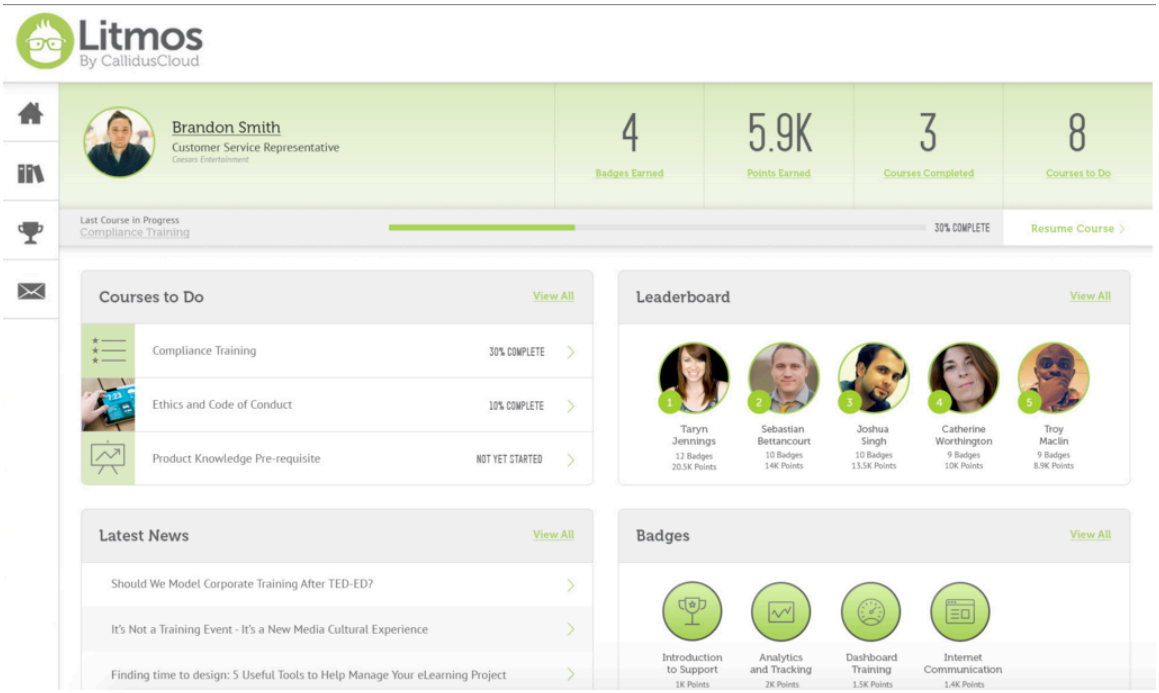

Figure 1: Screenshot of Litmos user interface. Taken from *technologyadvice.com*, Retrieved October 24, 2015, from http://technologyadvice.com/wp-content/uploads/2014/12/litmos_dashboard.jpg

Today, over 3,000 companies, including Udemy, Litmos, Enspire, Six Red Marbles, and Absorb exist to provide, create, and/or deliver e-learning services to academic and professional entities willing to adopt some level of e-learning into their respective learning environments (Vernau & Hauptmann, 2014). The percentage of US companies that have already incorporated some type of e-learning into their training

programs rose from 4% in 1994 to 77% in 2014 (Vernau & Hauptmann, 2014). Also in 2014, e-learning services were worth $91 billion in the United States, and were expected to rise at least 13% each year until 2017 (Vernau & Hauptmann, 2014; Saunderson 2015). With large percentages of training budgets being spent on adding or improving professional learning opportunities with technology, it is important that decision makers at those companies understand the best practices involved in adopting those services, as well as how to address common problems and concerns before they arise.

Hundreds of case studies, surveys, interviews and literature reviews on professional e-learning initiatives and adoptions have resulted over the last two decades as companies have incorporated e-learning services into their training programs. This research has looked at employers and employees, their learning environments, and individual learning characteristics (Brown 2001; Klein, Noe, & Chongwei, 2006; Watson, Foster, Rudolph, Whelan, Thomas, Behrend, Gissel, 2013). It has looked at the technology used and the history of technology use in those companies (McCormick 2001; Tarafdar, & Vaidya, 2007). It has also looked at employer and employee buy-in, their attitudes toward technology, and how positively or negatively the availability of technical support can impact both the employer and the employee (Scupola, 2008).

Overall, research on professional adoptions of e-learning have attempted to uncover both best practices and processes to avoid when adopting a new technology. These studies, in turn, have fueled subsequent adoptions and spurred the creation of non-academic publications by providing information to interested-parties (Vernau & Hauptmann, 2014). It is therefore important that accurate, reliable, and up-to-date

information about e-learning adoptions in professional settings be published and discussed.

The purpose of this report is to conduct a literature review of relevant articles that discuss the factors that impact e-learning adoptions in professional settings. In this way, I hope to better understand the challenges businesses face as they look to incorporate e-learning tools. I believe the best way to eradicate or resolve these issues before they arise in future adoptions is to understand their root cause, "to lessen their influence and increase participation in staff development" (Rabak & Cleveland-Innes, 2006, p. 118). This requires looking specifically at the documented encounters employers and employees have experienced when adopting e-learning services.

The research questions for this report are:

(1) What factors influence employer resistance to purchasing and launching an e-learning service?

(2) What factors influence employee resistance to using e-learning services provided by employers?

(3) What implications exist for future research?

Chapter 2: Method

This report covers literature published in scholarly, peer-reviewed journals about professional e-learning adoptions with a particular focus on resistance factors. While testimonials on blogs, websites, and non-peer reviewed journal articles exist, this report looked exclusively at peer-reviewed research conducted on the topic.

The search for acceptable peer-reviewed articles required the completion of two steps. First, the keywords "employee training OR professional training OR workplace training" and "e-learning OR elearning OR online learning" were jointly searched in all EBSCO databases. This search uncovered 7,910 peer-reviewed and non peer-reviewed articles.

The second step required that these results be filtered using the following criteria:

(1) The article appears in peer-reviewed academic journals

(2) The article was written in English

(3) The focus of the article is about, or includes, discussion of resistance factors or barriers (e.g. "negative OR resistance OR barrier")

The articles that did not satisfy these criteria were excluded. This left a total of 11 articles to meet the criteria outlined for the literature review. Relevant information on these articles appears below in Table 1.

Table 1

Evidence-based studies on resistance factors

#	Authors	Title	Methodology	Resistance Factor(s) Employer	Resistance Factor(s) Employee	Findings
1	Admiraal & Lockhorst (2009)	E-Learning in Small and Medium-sized Enterprises across Europe: Attitudes towards Technology, Learning and Training	• Survey (105 European companies/owner-managers) • Interview (105 owner manager, 35 employee)	• Limited budgets • Belief that e-learning is not their responsibility • Belief that e-learning is inflexible	N/A	The smaller the organization, the less likely that organization will have positive views towards using technology for information and formal e-learning. This is due in part to budgets and in part to the conservative attitudes held by small firm owner-managers.
2	Brown (2001)	Using computers to deliver training: Which employees learn and why?	Mixed methods research	N/A	• Individual Differences	Individual differences in employees may impact who will learn from different learning opportunities (e.g. traditional v online).
3	Cairns (2012)	Overcoming the challenges to developing an ROI for training and development	Literature Review	• No definite ROI • Uncertain goals leads to inconclusive measurements	N/A	ROI is key to helping a business determine the effectiveness of an e-learning initiative. A strong LMS and/or the aggregation of significant data tied to achievable outcomes is needed by HR departments.

Table 1, cont.

4	Ferraris, Manca, & Persico (2000)	Managing the change from face-to-face to distance training f or SMEs	Case Study	• Attitude/Poor previous experience	• Decreased social element • Fear of criticism • Availability of time • Attitude/Poor previous experience	The perceived compatibility of training, current job commitments, and low degree of technological mastery can all impact accepting a new training method, even when the overall attitude is positive.
5	Hung, Chen & Lee (2009)	Moving hospitals toward e-learning adoption: an empirical investigation	Survey (508 Taiwanese hospitals)	• Managerial • Technological • Organizational	N/A	Hospital e-learning resembles small to large-sized business e-learning adoptions. Managerial, technological, and organizational factors, as well as hospital size, all impact the strategy and success of an adoption.
6	Klein, Noe, & Chongwei (2006)	Motivation to learn and course outcomes: The impact of delivery mode, learning goal orientation, and perceived barriers and enablers	Naturally occurring quasi-experiment	N/A	• Attitude/Indiv idual Differences	Learner and instructional characteristics impact whether a technology is perceived as a barrier or enabler. Framing a technology or training as an enabler toward learning can result in higher motivation to complete a course.

Table 1, cont.

7	McCormick (2001)	Dealing with learner resistance t o technology-delivered training	Case Study	• Local level management disconnect with upper level	• General technology resistance • Apprehension learning a new interface • Increased responsibility • Different learning preferences • Decrease in social opportunities	Impersonal relationships between teacher/trainer and student, ill-prepared tech support, and minimal consideration of learning styles can all impact the successful adoption of e-learning training.
8	Rabak & Cleveland-Innes (2006)	Acceptance and Resistance to Corporate E-Learning: A Case From the Retail Sector	Survey & Interview (123 employees)	N/A	• Time • Perceived effort v reward • Technology aptitude • Concerns about performance reviews • General concern about equality between employees	Employee lack of time to complete training, lack of support and coaching, and lack of motivation from employers are all resistance factors affecting successful adoption. Also impacting positive adoption was the general concern regarding equality in experience between employees.

Table 1, cont.

9	Raymond, Uwizeyemung, Bergeron, & Gauvin (2012)	A framework for research on e-learning assimilation in SMEs: a strategic perspective	Literature Review	• Technical • Organizational • Environmental	N/A	Technological and environmental factors impact adoption indirectly through organizational factors. Owner-managers play a key role in guiding their workforce toward positive adoptions. Lack of a guiding plan can result in negative experiences.
10	Tarafdar, & Vaidya (2007)	Information technology adoption and the role of organizational readiness: the case of an Indian bank	Case Study	• Low organizational readiness • Lack of user-related goal setting	• Negative/wary attitude • Lack of perceived influence	While goals and targets were defined when setting up an IT Infrastructure, end-users and middle managers were not positively supported in the process and. Organizational readiness was not prepared to the same extent as goal setting.
11	Watson, Thompson, Rudolph, Whelan, Behrend, Gissel (2013)	When big brother is watching: Goal orientation shapes reactions to electronic monitoring during online training	Mixed Methods Research	N/A	• Individual Differences and learning styles	Some learners experience apprehension with online learning, believing that their every move is being tracked and watched.

Chapter 3: Findings and Discussion

In this section, the first and second research questions will be answered through analysis of the literature.

(1) What factors influence employer resistance to purchasing and launching an e-learning service?

(2) What factors influence employee resistance to using e-learning services provided by employers?

Employer Resistance

Two themes were identified concerning employer resistance in adopting e-learning technology for their organizations as shown in Table 2: (a) leadership and (b) cost. These themes will be expanded upon in this section.

Table 2

Employer Resistance Factors, Grouped

Theme		References
Leadership	Size & Attitude	Admiraal & Lockhorst (2009) Hung, Chen & Lee (2009) McCormick (2001) Raymond, Uwizeyemung, Bergeron, & Gauvin (2012)
	Goals	Raymond, Uwizeyemung, Bergeron, & Gauvin (2012) McCormick (2001)
Cost		Admiraal & Lockhorst (2009) Cairns (2012) Hung, Chen & Lee (2009) Raymond, Uwizeyemung, Bergeron, & Gauvin (2012)

Leadership. When it comes to making decisions for an organization, most important decisions are made by a head office or upper management. The decisions made

by these individuals or groups both directly and indirectly influence the employees who work for them. This is also true when decisions are made about the adoption of e-learning technology (Admiraal & Lockhorst, 2009; Hung, Chen, & Lee, 2009). The size of the organization, the attitudes of their executives, and the goals put in place by those executives can all positively or negatively impact an organization as they consider adopting an e-learning service.

Size and Attitude. Admiraal and Lockhorst's (2009) research discovered that in the small to mid-sized companies they surveyed (i.e. those companies comprised of 0-50 employees), leadership tended to hold more negative attitudes toward workplace e-learning. They attributed this to leadership's personal history using more traditional learning environments and the insufficient time they and their employees have during normal work hours to dedicate to formal or informal learning. Instead, these executives believed that job-related knowledge should be gained directly through hands-on training.

Resistance factors related to company size can also be related to distance. Smaller to mid-sized companies can usually be found in the same physical location. Larger companies tend to be spread out nationally or globally. In cases where there is a larger physical distance, upper management may see potential in an e-learning service, but lower level managers may not fully understand the need for it or may see the new technology as an unnecessary expense and waste of subsidiary time (McCormick, 2001). The disconnect between management at different levels and in different locations in larger organizations can cause friction, as corporate heads are seen as too distant and far removed from the local-management level to be able to make positive influential day-to-

day changes. In the case of an e-learning adoption, this could lead to the service not being used as intended or not being used at all (McCormick, 2001).

These attitudes exhibited by top officials, both positive and negative, have an impact on the people around them (Tarafdar & Vaidya, 2007; Scupola, 2008). Raymond, Uwizeyemungu, Bergeron, and Gauvin (2012) found that the beliefs, attitudes, and behaviors of the highest-level executives directly reflected the beliefs, attitudes, and behaviors of the overall learning culture at their place of work. If upper management exhibited overly negative or apathetic feelings toward technology used for learning, then those same feelings were often found in their employees. On the other hand, if employers exhibited positive feelings toward technology used for learning, then employees felt more motivated to use the technology themselves.

These physical and behavioral factors have the potential to link an employer to the positive or negative feelings associated with a technology, which could impact employees lower down in the hierarchy. If a higher-level executive exhibits a negative attitude toward e-learning, there is a chance that the learning culture may adopt the same perspective, causing resistance to an e-learning program. Therefore, if an employer plans on adopting e-learning as part of their training services, then she or he should evaluate their work environment and personal opinions.

As discussed in this section, the size of the company, the physical distance between levels of hierarchy, and the personal opinions of the employers themselves all impact how a technology may be received. But, this is not the only consideration. In order to come to an accurate decision about whether or not to use a technology, or which

technology to adopt, an organization's leadership needs to determine the how the adoption will align with the company's overall learning goals.

Goals. Goal setting is a necessary part of achieving any desired outcome. Goals provide a standard to aim for and a target to reach. For some, the goal setting process may include crafting a guiding mission statement. For others, it may involve setting up small milestones that build up to a larger objective. Regardless of the strategy used, goals help orient and motivate an individual or team toward achieving a desired end result. Without them, a team risks losing direction and an organization risks spending too much or too little on the wrong e-learning training service.

The specific learning needs of the organization should be forefront in an employer's mind when setting the organization's learning goals. Does the organization need an entirely self-paced learning option to accommodate work schedules and roles? Is the goal of the e-learning adoption to teach a new business process? What do employees need to learn, and what is the best way to convey that information? In their research on adoption of IT systems and e-learning, Raymond, Uwizeyemung, Bergeron, and Gauvin (2012) discovered that the organization's specific learning needs should be reflected in the affordances of the e-learning system to be adopted. For example, certain LMS and MOOC services can detract from the social aspect that comes with traditional classroom-based learning. Instead of learning in real time with a group of peers (and in some cases peers from separate departments who rarely see one another), learners sit at their desks and interact solely with the computer and the learning content in the online system. Therefore, if maintaining a social aspect is important to the organization and to the organization's employees, those particular e-learning services may conflict with the

organization's learning goals. Alternatives such as blended learning environments may be more suitable. Without an evaluation of the company's learning needs, appropriate evaluation of the learning system cannot successfully occur and the company risks investing in an ill-fitting program.

Therefore, the e-learning system to be invested in should be aligned with the organization's goals. If everything is in alignment, and the service to be adopted adequately meets the organization's goals, then management will be more likely to combat resistance within the organization. If information, resources, or the vision is misaligned, or not communicated appropriately to the rest of the organization, then the e-learning system may fail before it even has a chance to be adopted.

One way to help set up and organize goals, especially for a large project, is to define a mission statement. Mission statements are guiding goals tied to company beliefs set in place by executives and other high-level managers. Executive-level management, "through their beliefs and visions can offer guidelines to managers and employees" about an e-learning system and how it can best be used in the organization (Scupola, 2008, p. 81). The ideal statement has been thoughtfully considered by upper management and has received buy-in from multiple members of the organization. This signifies that the changes and updates to company policy that will soon occur have a purpose and are guided by the company's goals. The extent to which e-learning meets these goals set out by management will help determine its success.

However, not every company takes the time to create such a mission statement or consider its optimal end-goal for employees. As McCormick (2001) discusses, it is more often the case that a proposal or inquiry has been submitted for information about the

adoption of an e-learning system as a way to upgrade training without further thought for end-goals and intentions—or the end-goals and intentions of other members of the organization. This lack of higher-level forethought trickles down to end-users, who may be confused as to why a new system is being implemented and may end up resisting using the training themselves (McCormick, 2001).

Leadership and example-setting is a very large part of making any e-learning adoption successful or unsuccessful, but it is not the only factor to consider. The cost of a service can also contribute to an employer's resistance to adopting an e-learning solution for their organization.

Cost. Though providing training for employees is important due to its influence "in attracting talent, increasing productivity, and improving employee satisfaction and retention" (Cairns, 2012, p. 23), the costs associated with development and adoption can be prohibitive (Admiraal & Lockhorst, 2009; Hung, Chen & Lee 2009). Potential costs can involve the design and development of the actual learning environment, as well as the development of any associated hardware or software (Admiraal & Lockhorst, 2009). For example, for a fully customized e-learning system, Verizon Communication estimated that a third party company needs at least 40 hours and $15,000 to fully perfect a single hour of a course (George & Mcgee, 2003).

Other systems built on a pay-per-use or pay-per-seat model, such as services provided by Litmos, start with a base price and then increase as more seats and cloud space is needed (Figure 2). Their "Gold Package" starts at $699/$899 (depending on the number of times the company is billed per year), but still only includes half of the features of their more customized "enterprise" package. This price does not include the cost of developing the content for the course itself, nor does it include any technology upgrades that may need to occur in the company's building. Also, with this system, at least one person internally will need to be dedicated to creating the content to include in the course, and to train others how to use it once the course goes live. As you can imagine, the cost of building a new e-learning service can rise rapidly.

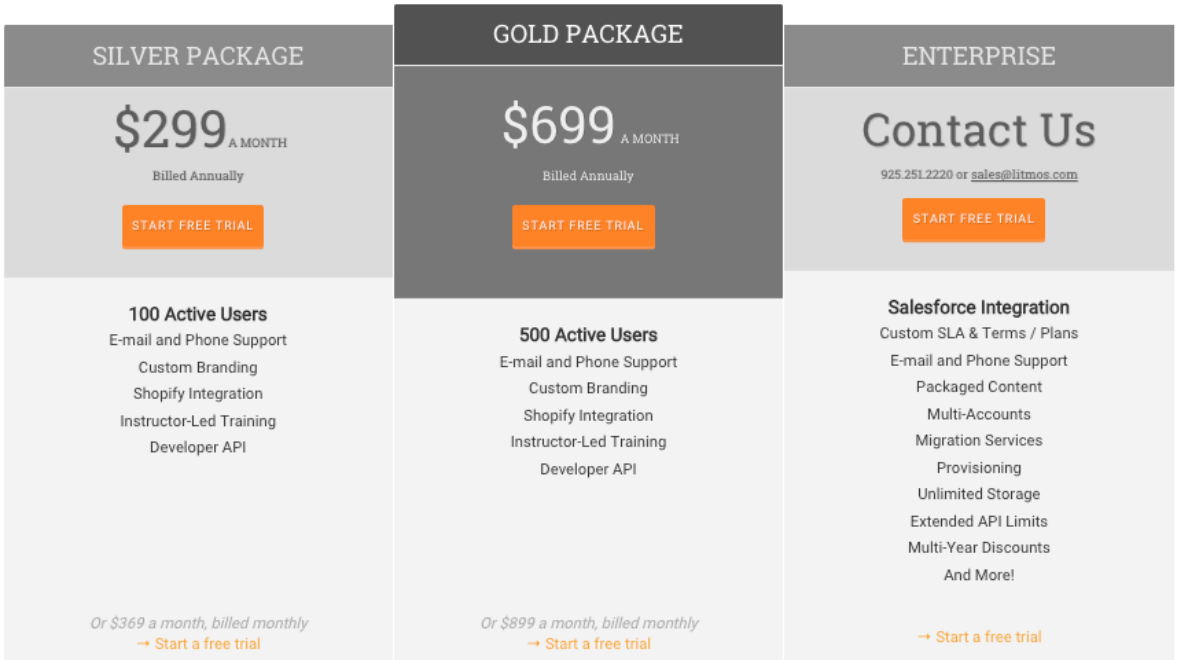

Figure 2: Screenshot of Litmos Pricing. Taken from Litmos.com. Retrieved from http://www.litmos.com/litmos-pricing/. Copyright 2015.

In 2011, US businesses spent $172 billion on training and development-related expenses (both for e-learning and face-to-face models) (Cairns 2012). However, if it is determined that the money expended does not equal the rewards achieved, then the training budget or program may experience some level of adjustment or be thrown out completely. This evaluation of rewards versus cost is called Return on Investment (ROI).

ROI has its roots in the four-part evaluation model developed by Don Kirkpatrick (Kirkpatrick, 1994). The four steps to this model, (a) participant reaction to the training experience, (b) new skills acquired, (c) application of the new skills on the job, and (d) performance results achieved, was modified in 1996 by Jack J. Phillips when he proposed a fifth step, (e) determining the monetary value of the training and development, along with any associated costs (Kirkpatrick 1994; Phillips 1996). This modified model encourages high-level stakeholders to look at the data-based results of similar training programs before investing in one themselves. If the rewards do not outweigh the costs, then the proposed program does not receive funding.

This is where problems occur for e-learning at the management level. Costs associated with e-learning can be high, depending on the service. Learning management system (LMS) service fees, IT costs (startup and upkeep), content development costs, and the staffing of support and training personnel all contribute to potentially very high development costs before learners even begin to use the training (Kumpikaitė, Vilmantė; Čiarnienė, Ramunė, 2008; Admiraal, Wilfried; Lockhorst, Ditte, 2009). The company's current assets, the complexity of the e-learning service, and the costs of both of these combined result in high resistance to adopting a new service (Raymond, Uwizeyemungu, Bergeron, & Gauvin, 2012). To overlook these costs, changemakers need data or an ROI

to report to high lever management and administration. However, such data does not currently exist, since it has been a difficult challenge for previous users to tie abstract job performance evaluations to concrete numbers (Cairns, 2012).

High startup costs coupled with uncertainty about how to measure success with the technology could result in an e-learning initiative being shut down early on in the research process. Even with employee backing and support, if the initiative does not meet the ROI, its chances of gaining funding are slim.

Summary. Managers and employers need to consider high-level issues before adopting an e-learning program for their organization. They need to evaluate their own personal feelings toward the technology, establish positive goals for the adoption, and consider how much they are willing to spend on a system that meets those goals. It should be the goal of all employers to set the example with the technology adoption, and not just to include it as a novel edition to a portfolio of services.

Employee Resistance

Two themes were identified in the literature for this report, as shown in Table 3. These include (a) work environment and (b) individual differences.

Table 3

Employee Resistance Factors, Grouped

Theme	Reference
Individual Differences	Brown (2001) Klein, Noe, & Chongwei (2006) Rabak & Cleveland-Innes (2006) Watson, Foster, Rudolph, Whelan, Thomas, Behrend, Gissel, (2013)
Work Environment	Ferraris, Manca, & Persico (2000) Tarafar and Vaidya (2007)

Individual Differences. Every learner has a different personality, learning style, and learning need. Every learner also has a different outlook on life and on technology. Consequently, these differences in learning style and attitude directly impact each employee's belief about whether or not a particular training will be effective.

Individual differences can be both internal and external. Personal preferences, concerns, beliefs, and fears are all examples of internal forces that can impact the acceptance of change. They can also either be a driver of acceptance or a restraining force in the adoption of an e-learning technology. Table 4 below—taken from Rabak & Cleveland-Innes (2006) and developed from Clarke (2006) and Rosenberg (2001) shows a few examples of internal forces that can cause resistance in an employee and can affect training outcomes.

Restraining forces	*Drivers of acceptance*
Low self-confidence	High self-confidence
Fear of technology	Embrace technology
Fear of failure	Success orientation
Resistant to change	Positive view of change
Unsuccessful in previous training	Successful in previous training
Lack of self direction	Self-directed
Lack of long-range career goals	Identified long-range career goals
Concern about employer monitoring	No concern if employer monitors progress
Need for face-to-face interaction	Does not require face-to-face interaction
Training not valued	High value placed on training
Feeling of being too old to learn	Age irrelevant to learning capability
Long period since last training taken	Continually learning new things
Does not equate learning with work	Equates learning with work
Feels training is irrelevant to work	Feels training is relevant to work
Believes that learning will not pay off	Believes that learning will pay off
Ability cannot improve	Ability can improve
Job duties do not require new skills	Job duties can require new skills

Figure 3: Screenshot of Internal Forces Affect E-learning in the Workplace. Reprinted from "Acceptance and Resistance to Corporate E-Learning: A Case From the Retail Sector," by L. Rabak and M. Cleveland-Innes, 2006, *Journal Of Distance Education, 21(2),* p. 120. Copyright 2006 by Canadian Association for Distance Education.

Klein, Noe, and Wang's (2006) naturally-occurring quasi-experiment examined how different factors impacted an employee's motivation to learn in either classroom or blended-learning environments. Learners who were not intrinsically motivated and who perceived factors—such as time needed to complete the course or location of the technology to access the course—as learning barriers were less likely to feel motivated to begin or continue working on workplace training. Lower motivation was also linked to lower satisfaction with the course and lower course outcomes. According to their research, internally framing a technology as barrier, not as an enabler, resulted in lower motivation to complete or use the course. If a particular learner believes that barriers exist, they become frustrated, their motivation to learn decreases, and their overall effort is reduced because they do not believe that additional effort will translate into improved performance (Brown, 2001; Mathieu, Tannenbaum, & Salas, 1992).

Rabak and Cleveland-Innes (2006) looked specifically at the acceptance and resistance factors toward corporate e-learning within a single retail chain. Their survey found that along with a lack of time available to access a computer to complete the training, detractors, or resistance to adoption factors, included employee lack of motivation based on the lack of company-offered incentives or remuneration. The presence of rewards and recognition were found to be substantial motivators in influencing employee acceptance of the new e-learning.

Another detractor to an employee's motivation occurs with the data itself. When data is entered online, information is stored and kept for later use. The answers to specific questions involved with e-learning, the time it takes to complete a particular section, and the completion rates of a program are all carefully tracked, sometimes in an effort to

capture an ROI. But, for some learners, this concept is discouraging as they believe it unnecessarily exposes their work-related weaknesses and stores them indefinitely. This "big brother" effect intimidates employees and can lead to a sense of fear or resentment to the company as a whole.

Watson, Foster, Rudolph, Whelan, Thomas, Behrend, and Gissel (2013) found in their research with 153 participants using a Microsoft Excel online training program that some learners experienced apprehension with online learning, believing that their every move was being tracked and watched online. Their findings suggested that individuals with high-performance goal orientation [the "pattern of cognition and behaviors individuals' exhibit in pursuit of the principal goal most salient in the learning context" (p. 643)] experience evaluation apprehension more often than individuals with low-performance goal orientations. Higher levels of evaluation apprehension were further found to lead to lower levels of skill attainment during web-based training.

The qualities that make each person an individual also make them susceptible to negative bias toward an e-learning service. While it is impossible to adjust a training to suit each individual employee's learning preferences or to mollify their individual fears, employers can make a concerted effort to provide the necessary emotional and educational support needed to overcome any negative bias toward an e-learning technology. An additional way they can do this is through monitoring the employee's direct work environment.

Work Environment. The work environment describes the ecosystem in which employees operate. It involves their work station, the office they work in, the employees and managers they work with, the size of the company, and the type of industry the

company is a part of. Each part of this ecosystem contributes to how an employee experiences work on a daily basis. If, for example, upper level management were to pay for and provide an e-learning system and make it a requirement for all employees, employees would in turn expect that those governing bodies and decision makers will also provide the appropriate technology and support needed to utilize the system. Insufficient time during work hours, a lack of perceived support, and inaccessible technology can all lead to employee resistance to using a new technology for learning purposes.

In a case study conducted by Ferraris, Manca and Persico (2008) on Italian small and medium enterprises (SMEs), it was discovered that the perceived compatibility of training with job-related tasks, current job commitments, and low degree of technological mastery can all contribute to resisting a new training method, even when the overall attitude is positive. In this study, 22 employees were asked to take an online course about the best practices in designing open and distance learning (ODL) courses. The focus of their project was to study any possible problems arising from the development and implementation of the online course. They concluded that concerns between the disparity between course prerequisites and employee competence, an imbalance between perceived support and actual employee autonomy when completing the course, and time-space constraints were all factors that contributed to employee resistance and frustration when using an online-based course.

Work-related environmental frustrations and resistance can also be triggered by a lack of organizational readiness. In their case study on the technology transition made by National Banking Services, Tarafar and Vaidya (2007) found that neither middle

managers nor employees were adequately trained or positively supported with the new training and technology services. While upper management had worked hard to define the new technology integration's goals and targets, they spent very little time responding to the concerns of those who worked under them. Consequently, the negative and wary attitudes exhibited by employees grew over time, and impacted the success of the technology in their particular bank.

As explained in this section, employees can be influenced by internal and external factors when evaluating an e-learning service. Unlike with employers, who look at the service from the perspective of how the new training will impact the company, employees look at the service from the perspective of how it will impact their own lives. Internal fears, which may or may not be magnified by their own employers' lack of attention (as in the case of the Indian bank), as well as their direct day-to-day environment directly impact the extent to which an e-learning service will be resisted.

Chapter 4: Conclusion and Implications

This report reviewed academic literature about resistance to adoption factors in professional e-learning adoptions. While non-academic sources exist on the topic, only peer-reviewed academic papers were reviewed for the report.

Three research questions guided this report. The first question asked about employer resistance factors when launching an e-learning service. For this question, two themes were identified: (a) leadership and (b) cost. The second question asked about employee resistance factors to using an e-learning service for professional learning. For this question, two themes were identified: (a) individual differences, and (b) work environment. Separately, they outline particular reasons why en employer and an employee may resist using e-learning training. Together, they describe fundamental concerns with the role of technology in the workplace.

It should be noted that there were limitations regarding this review. First, there are hundreds of magazine and editorial publications available from individual companies about e-learning experiences. These non peer-reviewed resources may reveal themes not found in academic research, which is currently very limited. Second, it should be noted that most of the peer-reviewed articles found for this report are not recent, which could result in outdated themes stemming from outdated models. Third, the majority of the articles come from case studies conducted outside of the United States. This could also lead to themes and concerns that could be more culturally-based in nature.

These two limitations could provide interesting areas for future research, which was the third research question posed in this report. Some of these future research topics could include:

(1) What are the effects of employee buy-in before the launch of e-learning training?

(2) Case studies on recent adoptions

(3) What differences in experience exist between utilizing in-house development for training and hiring a third-party service?

(4) Where do employers currently get their information about various e-learning services?

First, it was determined in this literature review that personal preference plays a very important role in determining the success or failure of an e-learning initiative. Knowing this, to what extent would receiving employee buy-in and support result in fewer instances of resistance to adoption? Are companies better off making decisions on a high level that employees need to accept? Or does collective contribution result in improved user rates? In academic educational contexts, receiving buy-in from users is often seen as an important step in the process. Research looking at this from a professional standpoint would be very helpful to the positive growth of the e-learning industry.

Second, case studies on recent adoptions could provide a very compelling insight into business processes today. From experience, I know that ethical concerns are also a huge issue that can stymie development—many content designers and subject matter experts are not aware or do not follow citation guidelines, causing rampant plagiarism. Additionally, I have witnessed excitement over the development of an e-learning program cause major timeline adjustments and delays as more product components become

attached. Peer-reviewed case studies are currently lacking for modern day businesses, so increased efforts in this area are needed.

Third, more and more companies are delving into the e-learning market. Be it a built-in-house LMS with software from Absorb, or a third-party development service like Enspire, an experience with one will not be necessarily similar to an experience with the other. Companies need to take a hard look at the talent that have to work with in-house if they are to build their own LMS or CMS. Conversely, they need to understand and be able to work with 3rd party timelines and development costs. A deeper look into the challenges and affordances of both would help grant some much-needed insight for interested stakeholders.

Last, it is currently unknown how most companies learn about different e-learning opportunities. Google searches with keywords and phrases such as “best LMS”, or “highest rated e-learning for professional use” bring up many sponsored links and ads. How do companies sort through all of this information and advertisement to find what they need? What are some best practices and information a company can utilize when beginning their e-learning search? Answers to these questions would provide help to companies all over the world as the search for e-learning solutions to fit their needs.

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